

Postgraduate student experiences of workplace learning for a professional psychology qualification in the South African context

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Abstract

Expanding access to higher education has taken priority in South Africa. There is a focus on improving entry into learning contexts and subsequent economic and social mobility opportunities by developing attributes in graduates that are in line with employment sector expectations. Work-integrated learning (WIL) processes serve to expose students to the real expectations of the workplace with the intention of bridging the gap between study completion and work readiness. The implementation and coordination of WIL placements are therefore an important component of professional degrees such as psychology masters. This article adopts the theory of connectivism as the central lens and emphasizes that knowledge is gathered through a network of connections between entities (nodes) that may consist of individuals, groups, fields, ideas or communities. The article describes the learning experience from the student's perspective and provides an example of how the connectivist approach can be used to bridge the complex learning process in professional qualifications.

Keywords

Connectivism, gradueness, personal learning environment, work-integrated learning

Expanding access to higher education has become a priority in South Africa (Department of Higher Education and Training, 2013), and with that expansion, there has been a concomitant rise in the numbers of graduates who enter the workplace inadequately prepared. Studies have shown that the quality of graduates and the demands of the job market are often misaligned. South Africa has high levels of unemployment and a high number of unemployed graduates; given this situation, the necessity for the training and development of industry-specific soft skills and relevant experience is readily apparent (Griesel and Parker, 2009). One of the measures employed by higher education institutions to address this skills gap is work-integrated learning (WIL). WIL is the enhancement of student learning through educational activities that integrate theory and practice in work-based contexts (University of South Africa, 2012). Moreover, it has played a key role in several innovative curricular, pedagogical and assessment projects currently being developed as a response to concerns about graduate-ness, employability and civic responsibility (Council of Higher Education, 2011). However, the employability of students is not based only on the skilful practices required

in the workplace: Developing a professional graduate requires more than a shopping list of skills. In this study, the focus is on a programme that aims to train professional researchers capable of applying and generating psychological knowledge for improving the collective understanding of the various social challenges facing the country or for generating new streams of income for organizations. Graduates entering workplaces that operate in the knowledge economy face complex challenges to their identity and have to balance the need to keep abreast of the latest developments in their industry while simultaneously meeting client demand. In addition, they may also face the challenge of creating new jobs in areas where there are no existing formal employment opportunities. There is, therefore, a need for training programmes to provide the soft

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skills that play a key role in long-term career development for research professionals.

Graduateness and the employment gap

According to Griesel and Parker (2009), higher education and the workplace share a misunderstanding about each other's role, with employers voicing concern over the quality of new graduates and institutions stating that employers are not fully appreciative of the qualities and skills that graduates possess. It is critical that central government labour planning mechanisms are informed by an understanding of how different post-schooling institutions and training systems connect learners to the world of work (Lewis, 2012). Demonstrating the relationship between educational qualifications and the employment success of graduates could provide a platform for developing appropriate, fit-for-purpose institutional programmes (Lewis, 2012).

Early approaches to the concept of graduateness, which emphasized key generic skills, have given way to more nuanced approaches that stress practical skills, personal attributes and metacognition (Griesel and Parker, 2009). Employability is mainly influenced by four broad, interrelated components: skilful practices, deep understanding grounded in a disciplinary base, efficacious beliefs about personal identity and self-worth and metacognition (Griesel and Parker, 2009). For the purpose of this article, metacognition, beliefs about identity and self-worth are of particular interest as we believe that these components strongly shape the early careers of professionals.

It is important to acknowledge that the progression into and through higher education to employment is not linear. Students make a choice to go down a particular road and/or have their pathways determined for them by various factors, which implies that their pathways are shaped by a combination of choices and constraints (Lewis, 2012). Professional training programmes, such as the master's degree in psychological research, should take cognizance of the various learning pathways that students take during their studies and how these pathways prepare them for transition to the workplace.

As stated earlier, among the learning processes used by institutions to address the graduate skills gap and provide students with insight into their chosen field is WIL. WIL takes into consideration the workplace setting as part of the learning experience (du Plessis, 2010), so that students learn from authentic work experiences and have the opportunity to test out new-found skills and knowledge (du Plessis, 2010; Harris et al., 2010). WIL requires a collaborative partnership between the university and the workplace to be successfully implemented. Collaborative partnerships challenge the traditional role of the university as transmitter of discipline-specific knowledge and that of the host business as the less active partner in the learning process (Choy and Delahaye, 2011). Instead, the student, the host organization and the higher education

institution co-create the learning process to achieve a more holistic learning experience, designed to encourage the development of industry-specific soft skills as well as technical expertise. WIL does not just require students to demonstrate an understanding of new knowledge; they must also apply that knowledge in ways that perceptibly benefit the workplace. Thus, there is a dual emphasis on the development of both the student and the workplace through WIL (Choy and Delahaye, 2011). In the programme under consideration in this article, WIL processes are at the core of its curriculum. With more than 6 years of WIL experiences among multiple cohorts of students, it seemed timely to reflect on the student learning achieved through WIL to inform future iterations of the programme with the aim of further developing graduateness.

The master's degree in research psychology

The research psychology profession in South Africa is shaped by specific legislation that governs the practice of psychology in the country (Cooper and Nicholas, 2012; Pretorius, 2012). South African psychology is primarily based on the primary healthcare function of providing mental healthcare services with a therapeutic approach (Cooper and Nicholas, 2012). The discipline is therefore heavily influenced by legislation that regulates healthcare practitioners. Within this regulatory framework, research psychologists develop relevant, culturally sensitive interventions, assessments and theories while ensuring that access to psychological knowledge and practices is disseminated among the broader population. While it is a professional category of practice, relatively few job advertisements are targeted at research psychologists. This can be attributed to common misconceptions about the role and focus of psychology as purely clinical in nature. Despite the scarcity of job adverts, having a master's in research psychology may be considered valuable in the workplace (Rascher, 2016). Rascher (2016) identified the employment sectors in which research psychology graduates tend to be absorbed in South Africa as academia, corporate research, health and social research, monitoring and evaluation, marketing research and research and development in psychometrics/testing. Furthermore, some respondents who had started companies or who worked as freelance researchers pursued work in a variety of different industries, including software testing, human resource management, business and training consulting and teaching (Rascher, 2016). The broad-ranging applications of the knowledge and skills acquired during training, coupled with the lack of visible or widely advertised employment opportunities for students, makes WIL particularly important for research psychology programmes, as students are linked to networks and social capital built on the reputation and infrastructure of the university.

The master's programme in research psychology is provided over 3 years. The first year is structured in line with

the principles of blended learning and uses a combination of online learning and face-to-face sessions. The remaining 2 years are off-campus with no classes and students work almost exclusively with their supervisor. Students from diverse backgrounds apply to be part of the programme and are trained as professional researchers in the discipline of psychology. The WIL component consists of two 10-week placements, usually at two different organizations. During each placement, students attend three on-campus supervision sessions facilitated by the placement coordinator. In addition, they complete three placement progress reports which they submit prior to the supervision sessions. These reports serve two purposes: the first is to provide insight into the individual experiences of students as they enter a supervised work environment, and the second is to highlight the key developmental issues they experience during their transition to the professional context. The reports thus provide a basis for the supervisor to discuss the student's experiences and offer mentoring on his or her professional development. The supervision sessions and progress reports are regarded as part of the placement process, designed to assist students in their personal and professional development.

Research problem

WIL methods have an extensive history of application in higher education. However, the majority of studies on WIL are based on undergraduate qualifications (Scott et al., 2007). While the benefits of WIL programmes have been widely discussed, the learning processes that take place during WIL remain a subject for study. The focus of this article is on what students learn as well as how they learn it. The practical development of workplace skills is a key but not the only component of a well-rounded graduate (Butcher and Rose-Adams, 2015; Griesel and Parker, 2009). It is also necessary to consider the emotional experience of students as they develop a professional identity and their experiences as they learn the necessary contextually bound soft skills required by employers in various employment sectors. The particular nature of psychology in South Africa requires additional research into the experiences of students at the master's level as they undergo the transition to work as professional psychological researchers. This study therefore explores the experiences of master's students during their placement periods. The students' experiences are examined from the connectivist perspective, focusing on four key theoretical components that provide an analytical framework for examining student learning in work placements.

Theoretical framework

Connectivism as a learning theory has received increasing attention in higher education research and several authors have explored its application to various educational

settings. This article draws heavily on the work of Tschofen and Mackness (2012), Duke et al. (2013) and Wang et al. (2014) because the approaches and concepts put forward by these authors are aligned with the aims of the learning processes in the programme under study. Connectivism is based on the principle that knowledge starts with a connection (Tschofen and Mackness, 2012). The process of obtaining knowledge starts with the individual who makes connections between entities (nodes) (Duke et al., 2013; Siemens, 2005; Tschofen and Mackness, 2012). These nodes may consist of individuals, groups, systems, fields, ideas or communities and can be accessed via Internet technologies such as electronic databases, web search engines and online information resources, or through personal learning networks and socialization into the disciplinary context (Duke et al., 2013; Tschofen and Mackness, 2012). The network of connections is expanded and traversed and this, in turn, continues the cycle of knowledge growth (Duke et al., 2013; Tschofen and Mackness, 2012).

To understand how learning occurs, we focus on two aspects of connectivism: the ways students interact in and between network nodes, and how they make connections between learning and the spaces in which they find themselves.

Interaction in and between network nodes

To understand the interaction that takes place in and between network nodes, four concepts will be considered: operation interaction, wayfinding, sense-making and innovation interaction (Wang et al., 2014). The concepts, put forward by Wang et al. (2014), describe the distinct but interlinked processes that underpin learning in professional programmes which require that learners develop a contextual sense of the theory and application of skills derived from the theories of the discipline.

The operation interaction level focuses on how students manage their own learning using the available resources. There are many information sources, which often makes it impossible to experience everything (Duke et al., 2013; Huff and Cruz, 2013). Critical skills required by master's students, in addition to the skills traditionally associated with research, include the ability to navigate among the plethora of online journals, data sets and university information repositories that form the foundation of knowledge for most students.

The wayfinding interaction level emphasizes the evaluation and navigation of information. In information-loaded environments, content is distributed through networks among individuals, enabling creativity and deep learning. For information to be made coherent and understandable to them, students need to evaluate which data are important and valuable for their purposes. Thus, a student's engagement with the content or with others in a group will assist them in finding the correct information (Wang et al., 2014).

The sense-making interaction level includes pattern recognition, information (knowledge) seeking, and a collaborative process that involves information aggregation and sharing, discussion and negotiation, reflection and decision-making. At this level, students connect nodes in a technological, social and concept (neural) network tightly together. A student's network identity and social presence are formed gradually by the participants in the activities performed at this level. It is particularly at this level that identity forming, developing and sharing occur (Duke et al., 2013; Wang et al., 2014).

The innovation interaction level involves a knowledge growth process. This process entails further reflection and presentation of the information gathered at the sense-making level. Through this level, the scope of the other three interactions is extended. The student gains more opportunities to communicate deeply with others and to obtain more support from the network by sharing their research outputs and learning portfolios. The process is combined with learner-content, learner-learner and learner-teacher interactions, which take place in collaborative and formal learning environments (Wang et al., 2014).

Exploring the connections between nodes of learning in different spaces

To achieve effective learning outcomes, there needs to be a bridging of the gap between theory and application, and this often provides both challenges and opportunities (Huff and Cruz, 2013). Bridging that gap requires an expansion of the conceptualization of how, when and where students learn. This requires further engagement by the teaching team with students, faculty, other staff in the institution and the community of practice to meet the demands of a dynamic marketplace. In this article, we explore how space is connected to learning, community and the marketplace.

Connecting space to learning suggests that learning continues to take place outside the classroom, even if the instructor is not present (Huff and Cruz, 2013). The physical classroom should be seen not as a collection of individual learners, but rather as a cohesive social and collective space in which interaction can be facilitated and cultivated (Huff and Cruz, 2013). Thus, a broader expression such as the term 'learning space' is preferred because it suggests that learning is not confined to a classroom (Huff and Cruz, 2013: 47). The placement, therefore, is regarded as a learning space in which students practise and gain new skills.

Connecting space to the community emphasizes that the university is not merely a site for learning but can act as an important liaison for engagement with the community. For example, the learning processes in the programme are intended to enhance the professional and research knowledge and skills of the students who will be providing psychological services to the citizens in the region. The work

placement organizations are often already providing psychological research services to the community and therefore are able to provide engaged learning opportunities for students.

Connecting space to the marketplace highlights the role of creativity. In the profession of psychology, there are not always job advertisements for research psychologists, but there is a plethora of work opportunities for research into various psychological and social issues (Rascher, 2016). Huff and Cruz (2013) argue that creative professionals will seek places that foster the creative process and the lifestyle, inside and outside work, that supports them.

Method

The method applied derives from the interpretative paradigm which emphasizes personal perspectives. Using qualitative content analysis, we analyse the students' reports of their placement experiences for emergent themes that earmark the transition to the work context that constitutes the WIL component for the master's programme in research psychology.

Data sources and analyses

The primary data sources for this study were therefore the reports delivered by students to programme coordinators during their work placements. Each student completes three progress reports for each placement period. In all, 206 placement reports were included in the analysis, spanning 6 years (2011–2016).

Qualitative content analysis is used to identify, analyse and report patterns in qualitative data. These patterns or themes organize data and provide a rich description. Each theme represents a patterned response within the data and captures important information relating to the research question (Braun and Clarke, 2006). The use of a qualitative descriptive approach such as content analysis is suitable for studies that employ a relatively low level of interpretation (Elo et al., 2014). Given that the primary purpose of this study is to provide a broad exploration of the subjective experiences of students, the use of qualitative content analysis is appropriate as the primary aim is to describe the experiences of students during workplace learning. The main concepts elaborated in the theoretical section of this article were used to create an a priori framework to guide the analysis of the placement reports. The following were established as the higher-order concepts for interpreting students' experiences: wayfinding, operation interaction, innovation interaction, sense-making, connecting space to learning, connecting space to community and connecting space to the marketplace. The researchers felt that the connectivist framework described above provided an integrated or holistic approach to understanding the multifaceted experiences of students transitioning to the workplace.

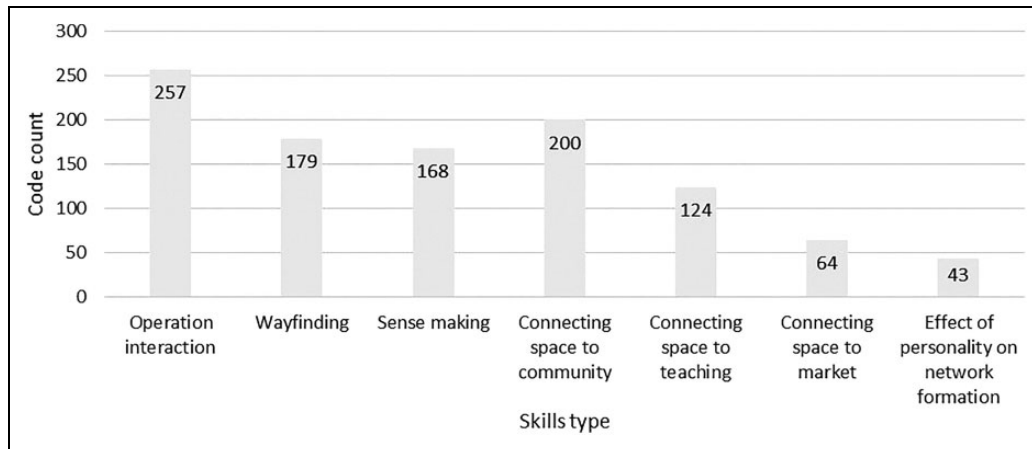


Figure 1. Code frequencies and hierarchies.

Results and discussion

The discussion of findings will centre on six primary themes. These were predefined as part of the theoretical framework sketched in the preceding section and coded across the corpus of texts. As can be seen in Figure 1, the students predominantly reflected on their day-to-day roles and functions in the placement organization. These reflections were captured in the operation interaction theme. Wayfinding was the second most prominent theme, focusing on how the students had constructed their identities as researchers in the various learning contexts in which they found themselves. The third theme, sense-making, highlighted how they drew on different resources to obtain a coherent understanding of the workplace. The fourth theme, connecting space to community, gathered together their perceptions of the process of entering specific communities of interest or communities of practice. The fifth theme, connecting space to learning, detailed how students made use of learning opportunities to practise or learn new skills. The last theme, connecting space to market, highlighted the ways in which students creatively positioned themselves for potential employment opportunities.

Operation interaction

The operation interaction theme focuses on how students manage their own learning through use of the available resources and relates to the theme of connecting the placement space to teaching. This theme includes a description of the tasks the student fulfils and encapsulates the type of work carried out by the organization. Figure 2 shows the most prominent areas in which students were involved when they were placed in their respective organizations. Predominantly, they were engaged in qualitative data gathering, quantitative analysis, report writing, qualitative data analysis literature reviews, presentations on their work to clients and teams and data cleaning

processes. Their introduction into the research field at these core but basic skill levels allowed the students to develop a realistic sense of their capabilities and their theoretical knowledge of research.

Given the structure of the programme and the timing of the reports, it is understandable that operation interaction was identified as a dominant theme. Throughout the year, students are encouraged to catalogue their learning, and the skills they develop during placements are a consistent feature of their reflections on their learning. Most organizations require relatively similar exposure from students in terms of content knowledge – such as knowledge of analytical techniques, relevant literature and academic writing skills – but placements vary considerably with regard to the degree of competence required. The distinction is an important consideration to bear in mind when linking students to a placement organization. The discussion should not focus only on the content knowledge they are required to have and are expected to learn but also on the degree of competence they are assumed to possess at the beginning of the placement.

Wayfinding

Wayfinding is emphasized in students' reflections on the learning processes when they describe the strategies through which they evaluated new, novel or complex information. Some reflected on gaps in their learning and identified areas in which they required further development. In the reflection below, the student reflects on how their self-perception as a creative individual was challenged by the norms and processes of the placement organization. The student reflects on how they would need to adjust their understanding of the value of creativity in light of feedback from the organization, which has very specific reporting processes and requirements. This highlights how students need to reflect not only on their hard skills in an organizational context but also on how their

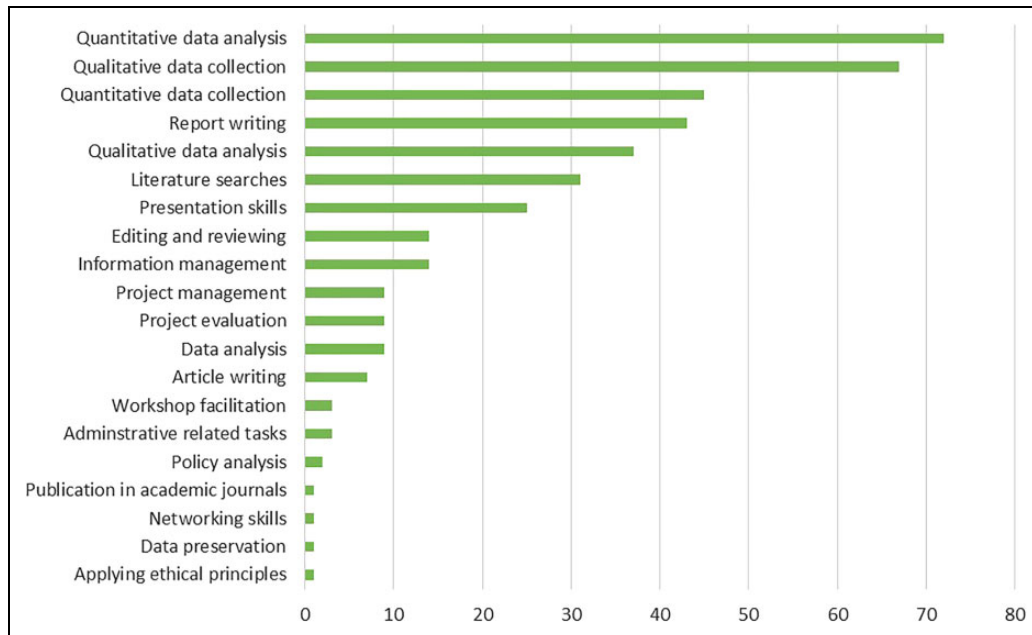


Figure 2. Breakdown of the skills developed during placements.

individual work style, values and identity influence their ability to deliver on projects.

My worry/concern/issue now is the feedback I have been getting on some of the bigger tasks that I have been doing. I am doing well, but of course there is still a lot that I don't know, especially in terms of reporting and exactly how the company likes certain things done. I like to think I am a creative person and I tried to be a bit creative in my first report, but the company likes things done in a very specific way and I had to redo 90% of the report, which is a bit disheartening but I just need to keep reminding myself that I am still learning and mistakes are not the end of the world.

Exposure to working in an organization can provide insight into the career identity that students want to form. During this process, they are able to test their idealized career identity against the reality of working in a specific context. In the reflection below, the student reflects on a long-term plan to enter academia, describing how their initial perceptions and understanding of what an academic was had to be reconsidered. The student notes the tension between research and teaching and considers its implications when they formally enter the world of work.

In my ten-year plan, I definitely include making the move towards working in the academic research field. Therefore this fits in perfectly. From what I have seen it is difficult to find the balance between working as a lecturer and working as a researcher. One or the other seems to take a back seat at times. I think as the weeks go on it will be up to me to see how I can find a balance in my future career which would be

suitable for me. The ideal situation may be a higher proportion of either teaching or research in the future but that is not clear yet at this time.

The process of wayfinding is a complex meaning-making process through which students navigate between their preconceptions of their abilities, their values, their ideals and their experiences during the placement. It highlights how students construct their identities as professional researchers in different placement contexts. From a teaching perspective, the wayfinding process is a means of facilitating deeper learning among students as they seek to position themselves in their chosen interest or community.

Sense-making

The sense-making theme focuses on how the students made sense of the challenge or barrier that contributed to or hindered their learning experience and on their reflections as they tried to make sense of the environment and their role and place within it. In the comment reproduced below, a student reflects on how they expected to contribute to the NGO they joined for their placement period. The reflection consistently highlights the disjuncture between the implicit expectation that the student should be a knowledgeable research consultant and the realization that they did not know how to fulfil that role. The student clearly implies that there is an ideal professional character that they are being measured against, albeit intrapersonally. The student exhibits a lack of clarity about their professional identity and a low sense of self-efficacy, which will likely have a negative impact on their employment-seeking activities.

Despite having enquired with the organization on numerous occasions as to the progress and development of the diversity project and how I could assist in realizing this project, I have not yet a clear idea as to how, as a research consultant I fit into an NGO or rather into the [the organization's] work frame. This having been said, in my current state I honestly feel a sense of hopelessness and uncertainty. I am questioning my level of competency as an independent, knowledgeable researcher or much more important I feel that I still lack the concept of what characteristics I need to strengthen within my personal and professional domain so as to become a competent and knowledgeable consultant. Lastly, I feel a great sense of doubt as to how I will find a place of employment once I have completed my internship, although I still believe that everything might work out in a year or two.

While this reflection predominantly focuses on the student's intrapersonal processes, the one below provides a sense of how the environment in which the research is conducted can have a significant impact on the ability and capacity of the students to learn. Highlighting the emotional impact of working in impoverished areas, the reflection conveys a sense of being overwhelmed by the scale of the issues being addressed. However, the student goes on to reflect on how the community of support from the other professionals working on the project provided a sense of hope, and on how the student's role as an evaluator can support these community members who inspire hope in difficult conditions:

It is very challenging working in this environment as one is constantly reminded of poverty, illness and child neglect. But it is also heart-warming to people who care and try and assist where possible. Programme evaluation is very important in such instances as it affords the opportunity to see how much the community needs NPOs and NGOs and do they really make a difference.

Sense-making as a learning process stresses the collaborative nature of learning during a placement. During the sense-making phase of their learning, students are recognizing how their previous learning, their peers and their colleagues at the placement organization help to make sense of the wide array of information to which they are exposed. Careful facilitation of the sense-making process, particularly in the distance education context, can help students to develop coherent learning from a diverse range of situations and experiences.

Connecting space to community

The connecting space to community theme was related to how students perceived the process of connecting to specific communities of interest or communities of practice. The reflections in this theme focused predominantly on the individual's experience of entering an organizational or

community setting. Students reflected on their feelings of anxiety and emotional sense of belonging. A number of participants reflected on the importance of the initial contact in the organization as a defining moment for later experiences. For example:

Well in the beginning I was a bit anxious because I did not know what to expect or how the people will receive me. But since I was told what to do it became a bit easier. It also makes it easier that there are two of my classmates here but we notice people don't go for lunch here, they eat at their desks, which is different from what we're used to. I have never worked in such a setting; the dress code is quite different, more professional. Also having to learn to work from 8 to 4 is very new for me. I'm still adjusting but at least I come in twice a week. I've also seen that there are some things that are not well received, like questioning the questionnaire of the survey so there are also some no-go zones.

The desire to become more professional, as expressed above, was a consistent feature of students' reflections during the initial contact phase with the organization. In the reflection above, the student highlights taken-for-granted requirements of the workplace, such as adapting to structured working hours, learning to communicate criticism of colleagues' work and understanding the norms and culture of the organization. The ability to understand and integrate into the sociocultural practices of an organization appeared to be an important need for students, which is understandable because, during the placement, they are in the early phase of career identity formation.

The motivations behind the placement choice varied among students but fell into two broad categories. Some chose a certain placement company because they wanted more exposure to a particular skill set or type of research, while others' choices were based on a desire to gain insight into and exposure to specific communities of practice. In the reflection below, the student reflects on how the choice was predominantly motivated by the specific research area of the organization. The exposure to community members who are recipients of the knowledge produced is highlighted as a particularly advantageous experience:

This is one of the main reasons I chose to work with [the organization] because the core business speaks to my interest in the interface between business and society. Since this is not the only kind of research [the organization] engages in, I am gaining exposure in applying research in two other areas. I appreciate this about the organization even more now because I've had the opportunity to work directly with community members since my previous report.

While the above reflections provide snippets of the students' experiences, the process of joining community networks is a complex process and is characterized by initial feelings of anxiety, confusion and exclusion as the students

search for their space within the organization. The implicit learning needs in these reflections are for additional skills and models for identifying organizational culture, identifying norms and practices that are implied but deeply embedded in the organizational culture and emotional support during the initial weeks when a sense of isolation might discourage active engagement.

Connecting space to learning

The connecting space to learning theme provides insight into the specific skills and topics that students learned or hoped to learn during their placement period. The learning expectations are linked to students' interests, prior exposure to theoretical training during coursework and past employment or volunteer experiences. Within this theme, the emphasis was on the process by which students constructed their learning while in the new work environment. Their reflections related their learning to their changing understanding of their values, and the value systems of the discipline and of the organization.

In the excerpt below, the student reflects on their role as a monitoring and evaluation officer and the role of ethics in their conduct as a professional researcher. The student emphasizes the impact of their actions on the larger community as researcher in an evaluation project. The reflection highlights a shift from the perception of ethical principles as a set of rules and regulations to perceiving them as a set of values that need to be applied in everyday activities:

This gives me the view that as a researcher I need to always be ethical in my conduct and to do right by people as this is a very important work that affects a lot of people's lives, so it is important to make sure that the results are a true reflection of the community you're assessing or the program evaluated.

This reflection also highlights a shift in understanding, acknowledging the importance of research rigour and validity as more than a set of guidelines. The student realizes that inaccurate results could have a negative impact on a broad range of individuals in the community.

Successful completion of the qualification requires the submission of a dissertation of full scope. The various learning experiences to which students are exposed are intended to feed into the dissertation, with the theoretical training complemented by practical exposure during the placement period. In the following excerpt, the student reflects on their first exposure to sampling techniques. While highlighting the difficulty, the reflection ends with a clear connection to the student's own study for the dissertation:

I've realized it's ongoing. I've learnt how difficult it is to sample, we did a multi-stage, stratified sampling. This will

help very much with my own thesis and also in future I will need these skills especially when doing research on large samples.

As stated earlier, the transition from largely theoretical exposure to psychological and research knowledge to the practical application of the knowledge in specific contexts is a complex process. Students' reports confirmed this complexity. The reflections on knowledge in the students' placement reports not only stress the importance of the exposure but also describe initial feelings of being overwhelmed and of self-doubt, replaced later by a sense of success as they master the skills required during the placement. The reflections on the teaching process frequently highlight the gap between the theoretical acquisition of knowledge and their ability to apply that knowledge when required. The implication for teachers is that it is imperative that students are consistently and effectively linked to the resources they need during the early phases of their placement, as the emotional and psychological demands they experience may hinder their ability and self-efficacy in the application of knowledge in practice.

Connecting space to market

This theme concerns the perceptions of students as they link their learning experiences to the marketplace. In this category, we were looking in particular for reflections on how the student approached the workplace creatively, with the aim of developing job opportunities during the placement. For example:

Being in this environment, it is really important for me to build up good relationships with everyone especially because I may apply here for a permanent position next year, and this placement gives me a massive advantage above anyone else applying here as this is me 'living out my CV' for them in a sense. If I make a good impression now, it will be invaluable in securing me a job here.

Here, the student emphasizes the importance of building good relationships with everyone at the placement. There is an awareness that just submitting a CV for an advertised position is not enough, and therefore the placement is treated as an interview period. Some students therefore feel the need to take on more tasks to establish a social presence in the company. Getting involved in more projects is a way of providing the placement supervisor with a sense of the student's work ethic.

The ability to connect to the market is key, given the socio-economic context of South Africa. The articulation gap between completion of a qualification and entering the employment market is a perennial problem for the higher education sector. Facilitating the process of connecting the learning space to the market helps to develop students'

ability to commercialize their knowledge and improve their employability.

Discussion and conclusion

As stated earlier, one of starting points for this article is the assumption that metacognition, beliefs about identity and self-worth play a key role in the early career development of professional graduates (Griesel and Parker, 2009). For this reason, we drew heavily on the work of Huff and Cruz (2013), Duke et al. (2013) and Wang et al. (2014) to frame four major concepts that provided a framework of analysis for understanding how and what learning takes place during work placements. From the reports analysed, students place emphasis on the hard skills acquired during the placement process, and there are numerous examples of the various technical micro-skills they develop during the 20 weeks of placement. During the process, students gain insight into which skills are relevant to the various employment contexts they wish to enter, and the exposure to the workplace is beneficial in preparing them for what awaits them in their professional careers. This further informs the training programme as to what theoretical components should be emphasized and it serves to bridge the gap between the market and training institutes.

Thus, when recruiting a new placement organization, placement coordinators can ascertain the types of skills and research in which the organization engages, so that they can assist students to make well-informed decisions when choosing their placement company. If training institutes do not listen to what the market requires, the numbers of unemployed graduates will be exacerbated.

However, the employability of graduates is not based solely on the skills and practices required in the workplace: Developing a professional graduate requires more than a shopping list of skills. There needs also to be deep reflection on the decisions they make, taking into consideration the variety of factors that may play a role and how these may shape their professional identity. This is where the wayfinding and sense-making processes of the connectivist approach are significant. While the overt emphasis during the learning process is on connecting to community, teaching and market spaces, a key aim of the placements is to facilitate deep connections between the students, the discipline and the community in which they practise their discipline. For effective learning to take place, it is necessary for students to reflect critically on their role, values, function and aims in the placement organization and in the discipline. Wayfinding is an emotionally complex process in which students question their value and role in imagined or real communities of practice. In these wayfinding and sense-making phases, there are uncomfortable and unpleasant feelings of uncertainty which may provoke students into action to clarify their role in the community of practice. However, not all students are equipped to navigate

layers of uncertainty without explicit guidance and they may experience the adjustment process as an obstacle to their entry into the community.

The possibility of unemployment after completing their qualification places pressure on students to create opportunities for themselves. This may entail undertaking both placements at the same organization or being involved in projects beyond the placement period. Students actively strove to connect the teaching space to the market opportunities embedded in their placements. Even though they may not necessarily obtain employment at their placement organization, they are aware that the placement has enabled them to become part of a professional network that could link them to a broader range of contacts. The transition from student to employee is not a linear progression. By actively facilitating a connectivist approach to learning during work placement programmes, using the concepts put forward in the theoretical section of this article, post-graduate programmes can support students during their transition from formal learning to the first phases of career development.

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